SYSTEM AND METHOD FOR
INDEPENDENT POWER SEQUENCING OF INTEGRATED CIRCUITS

ABSTRACT OF THE DISCLOSURE

A circuit for applying power to mixed mode integrated circuits in a predefined sequence. The circuit includes a first circuit powered by a first voltage and a second circuit powered by a second voltage that is less than the first voltage and having the second voltage coupled to the first circuit. The circuit for applying power to mixed mode integrated circuits includes, a modified IO cell of the second circuit. The modified IO cell has a driver transistor including a back gate terminal, a gate terminal that is driven by the second circuit, a source terminal that is coupled to a first circuit signal, and a drain terminal that is coupled to the second power supply. The circuit for applying power to mixed mode integrated circuits further includes, a controller circuit coupled to the first voltage and the second voltage supplied as controller circuit inputs. The controller circuit has a plurality of controller circuit outputs. The circuit for applying power to mixed mode integrated circuits also includes, a back gate bias application circuit. The back gate bias application circuit has a plurality of inputs coupled to the plurality of controller circuit outputs, and an output coupled to the backgate of the driver transistor backgate terminal.

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